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NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS

LIST OF REPORTS
WITH PRICES



EDITION MARCH 1934

NATIONAL ADVISORY COMMITTEE
FOR AERONAUTICS

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WITH PRICES

EDITION MARCH 1934



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1934

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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¹ 12	Experimental Researches on the Resistance of Air. By L. Marchis. (Second Annual, 1916)	
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144	The Decay of a Simple Eddy. By H. Bateman. (Eighth Annual, 1922)	. 05
³ 151	General Biplane Theory. By Max M. Munk. (Eighth Annual, 1922)	
185	The Resistance of Spheres in Wind Tunnels and in Air. By David L. Bacon and Elliott G. Reid. (Ninth Annual, 1923)	. 10
³ 197	A New Relation Between the Induced Yawing Moments and the Rolling Moments of an Airfoil in Straight Motion. By Max M. Munk. (Tenth Annual, 1924)	

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287	Theories of Flow Similitude. By A. F. Zahm. (Thirteenth Annual, 1927)-----	. 05
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316	Tables for Pressure of Air on Coming to Rest from Various Speeds. By A. F. Zahm and F. A. Louden. (Fifteenth Annual, 1929)-----	. 05
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465	Determination of the Theoretical Pressure Distribution for Twenty Airfoils. By I. E. Garlick. (Nineteenth Annual, 1933)-----	. 05

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¹ 93	Aerodynamic Characteristics of Airfoils. By National Advisory Committee for Aeronautics. (Sixth Annual, 1920)-----	
³ 111	The Variation of Airfoil Lift and Drag Coefficients with Changes in Size and Speed. By W. S. Diehl. (Seventh Annual, 1921)-----	
³ 121	The Minimum Induced Drag of Airfoils. By Max M. Munk. (Seventh Annual, 1921)-----	

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³ 152	The Aerodynamic Properties of Thick Aerofoils—II. By F. H. Norton and D. L. Bacon. (Eighth Annual, 1922)-----	
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403	Ice Prevention on Aircraft by Means of Engine Exhaust Heat and a Technical Study of Heat Transmission from a Clark Y Airfoil. By Theodore Theodorson and William C. Clay. Eighteenth Annual, 1932)-----	. 20
406	Drop and Flight Tests on NY-2 Landing Gears, Including Measurements of Vertical Velocities at Landing. By W. C. Peck and A. P. Beard. (Eighteenth Annual, 1932)-----	. 15
408	General Formulas and Charts for the Calculation of Airplane Performance. By W. Bailey Oswald. (Eighteenth Annual, 1932)-----	. 25
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414	The Effect on Airplane Performance of Several Types of Low-Drag Cowling for Radial Air-Cooled Engines. By Wm. H. McAvoy, Oscar W. Schey, and Alfred W. Young. (Eighteenth Annual, 1932)-----	. 20
415	Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. Part I. Thick Wing—N. A. C. A. Cowled Nacelle—Tractor Propeller. By Donald H. Wood. (Eighteenth Annual, 1932)-----	. 10

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462	Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. Part III—Clark Y Wing—Various Radial-Engine Cowlings—Tractor Propeller. By Donald H. Wood. (Nineteenth Annual, 1933)-----	. 10

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AIRPLANES—MODEL EXPERIMENTS—Continued

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137	Point Drag and Total Drag of Navy Struts No. 1 Modified. By A. F. Zahm, R. H. Smith, and G. C. Hill. (Eighth Annual, 1922)-----	. 05
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³ 225	The Air Forces on a Model of the Sperry Messenger Airplane Without Propeller. By Max M. Munk and Walter S. Diehl. (Eleventh Annual, 1925)-----	
236	Tests on Airplane Fuselages, Floats, and Hulls. By Walter S. Diehl. (Twelfth Annual, 1926)-----	. 15
254	Distribution of Pressure over Model of the Upper Wing and Aileron of a Fokker D-VII Airplane. By A. J. Fairbanks. (Twelfth Annual, 1926)-----	. 10
256	The Air Forces on a Systematic Series of Biplane and Triplane Cellule Models. By Max M. Munk. (Twelfth Annual, 1926)-----	. 15
260	The Effect of a Flap and Ailerons on the N. A. C. A.-M6 Airfoil Section. By George J. Higgins and Eastman N. Jacobs. (Thirteenth Annual, 1927)-----	. 10
266	Air Force and Moment of N-20 Wing with Certain Cut-Outs. By R. H. Smith. (Thirteenth Annual, 1927)-----	. 05

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269	Air Force Tests of Sperry Messenger Model with Six Sets of Wings. By James M. Shoemaker. (Thirteenth Annual, 1927)-----	
273	Wind Tunnel Tests on Autorotation and the "Flat Spin." By Montgomery Knight. (Thirteenth Annual, 1927)-----	\$0. 10
279	Tests on Models of Three British Airplanes in the Variable Density Wind Tunnel. By George J. Higgins, W. S. Diehl, and George L. DeFoe. (Thirteenth Annual, 1927)-----	. 15
296	Pressure Distribution Tests on PW-9 Wing Models from -18° through 90° Angle of Attack. By Oscar E. Loeser, jr. (Fourteenth Annual, 1928)-----	. 15
417	Pressure Distribution Tests on a Series of Clark Y Biplane Cellules with Special Reference to Safety. By Richard W. Noyes. (Eighteenth Annual, 1932)-----	. 10
419	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. I—Ordinary Ailerons on Rectangular Wings. By Fred E. Weick and Carl J. Wenzinger. (Eighteenth Annual, 1932)-----	. 10
422	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. II—Slotted Ailerons and Frise Ailerons. By Fred E. Weick and Richard W. Noyes. (Eighteenth Annual, 1932)-----	. 05
423	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. III—Ordinary Ailerons Rigged up 10° When Neutral. By Fred E. Weick and Carl J. Wenzinger. (Eighteenth Annual, 1932)-----	. 05
424	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. IV—Floating-Tip Ailerons on Rectangular Wings. By Fred E. Weick and Thomas A. Harris. (Eighteenth Annual, 1932)-----	. 10

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439	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. V—Spoilers and Ailerons on Rectangular Wings. By Fred E. Weick and Joseph A. Shortal. (Eighteenth Annual, 1932)-----	. 10
444	Wind-Tunnel Research Comparing Lateral Control Devices, Particularly at High Angles of Attack. VI—Skewed Ailerons on Rectangular Wings. By Fred E. Weick and Thomas A. Harris. (Nineteenth Annual, 1933)-----	. 05
445	Working Charts for the Determination of the Lift Distribution between Biplane Wings. By Paul Kuhn. (Nineteenth Annual, 1933)-----	. 10
456	The Aerodynamic Forces and Moments Exerted on a Spinning Model of the "NY-1" Airplane as Measured by the Spinning Balance. By M. J. Bamber and C. H. Zimmerman. (Nineteenth Annual, 1933)-----	. 05
458	Relative Loading on Biplane Wings. By Walter S. Diehl. (Nineteenth Annual, 1933)-----	. 10
468	The Interference between Struts in Various Combinations. By David Biermann and William H. Herrnstein, Jr. (Nineteenth Annual, 1933)-----	. 05
472	Wind-Tunnel Tests on Combinations of a Wing with Fixed Auxiliary Airfoils having Various Chords and Profiles. By Fred E. Weick and Robert Sanders. (Nineteenth Annual, 1933)-----	. 10
480	The Aerodynamic Effects of Wing Cut-Outs. By Albert Sherman-----	

AIRSHIPS

No.	Title	Price
3 115	Bending Moments, Envelope and Cable Stresses in Nonrigid Airships. By C. P. Burgess. (Seventh Annual, 1921)	
117	The Drag of Zeppelin Airships. By Max M. Munk. (Seventh Annual, 1921)	\$0.05
138	The Drag of "C" Class Airship Hull with Varying Lengths of Cylindric Midships. By A. F. Zahm, R. H. Smith, and G. C. Hill. (Eighth Annual, 1922)	.05
164	The Inertia Coefficients of an Airship in a Frictionless Fluid. By H. Bateman. (Ninth Annual, 1923)	.05
3 184	The Aerodynamic Forces on Airship Hulls. By Max M. Munk. (Ninth Annual, 1923)	
204	Forces on Airships in Gusts. By C. P. Burgess. (Tenth Annual, 1924)	.05
208	Determination of the Turning Characteristics of an Airship by Means of a Camera Obscura. By J. W. Crowley, jr., and R. G. Freeman. (Tenth Annual, 1924)	.10
210	Inertia Factors of Ellipsoids for Use in Airship Design. By L. B. Tuckerman. (Eleventh Annual, 1925)	.05
211	Water Model Tests for Semirigid Airships. By L. B. Tuckerman. (Eleventh Annual, 1925)	.05
212	Stability Equations for Airship Hulls. By A. F. Zahm. (Eleventh Annual, 1925)	.05
215	Air Forces, Moments, and Damping on Model of Fleet Airship Shenandoah. By A. F. Zahm, R. H. Smith, and F. A. Louden. (Eleventh Annual, 1925)	.15
223	Pressure Distribution on the C-7 Airship. By J. W. Crowley, jr., and S. J. DeFrance. (Eleventh Annual, 1925)	.15

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291	Drag of C-Class Airship Hulls of Various Fineness Ratios. By A. F. Zahm, R. H. Smith, and F. A. Louden. (Fourteenth Annual, 1928)	\$0. 10
318	Speed and Deceleration Trials of U. S. S. Los Angeles, September, 1927. By S. J. DeFrance and C. P. Burgess. (Fifteenth Annual, 1929)	. 10
324	Flight Tests on U. S. S. Los Angeles. Part I. Full-Scale Pressure Distribution Investigation. By S. J. DeFrance. (Fifteenth Annual, 1929)	. 15
325	Flight Tests on U. S. S. Los Angeles. Part II. Stress and Strength Determination. By C. P. Burgess. (Fifteenth Annual, 1929)	. 15
333	Full-Scale Turning Characteristics of the U. S. S. Los Angeles. By F. L. Thompson. (Fifteenth Annual, 1929)	. 10
394	Airship Model Tests in the Variable Density Wind Tunnel. By Ira H. Abbott. (Seventeenth Annual, 1931)	. 20
397	The Drag Characteristics of Several Airships Determined by Deceleration Tests. By F. L. Thompson and H. W. Kirschbaum. (Seventeenth Annual, 1931)	. 10
405	Application of Practical Hydrodynamics to Airship Design. By R. H. Upson and W. A. Klikoff. (Eighteenth Annual, 1932)	. 15
430	Measurements of Flow in the Boundary Layer a 1/40-Scale Model of the U. S. Airship "Akron." By Hugh B. Freeman. (Eighteenth Annual, 1932)	. 05
432	Force Measurements on a 1/40-Scale Model of the U. S. Airship "Akron." By Hugh B. Freeman. (Eighteenth Annual, 1932)	. 05
443	Pressure-Distribution Measurements on the Hull and Fins of a 1/40-Scale Model of the U. S. Airship "Akron." By Hugh B. Freeman. (Nineteenth Annual, 1933)	. 05
451	The Drag of Two Streamline Bodies as Affected by Protuberances and Appendages. By Ira H. Abbott. (Nineteenth Annual, 1933)	. 05

AUTOGIROS

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475	Wing Pressure Distribution and Rotor-Blade Motion of an Autogiro as Determined in Flight. By John B. Wheatley. (Twentieth Annual, 1934)-----	. 05

ENGINES AND ACCESSORIES

¹ 7	Thermodynamic Efficiency of Present Types of Internal Combustion Engines for Aircraft. By Columbia University. (First Annual, 1915)----- Part 1. Review of the Development of Engines Suitable for Aeronautic Service. Part 2. Aero Engines Analyzed with Reference to Elements of Process or Function.	
¹ 10	Mufflers for Aeronautic Engine. By H. Diederichs and G. B. Upton. (Second Annual, 1916)-----	
¹ 11	Carburetor Design—A Preliminary Study of the State of the Art. By Charles Edward Lucke, assisted by Friedrich Otto Willhofft. (Second Annual, 1916)-----	
¹ 23	Aeronautic Power-Plant Investigations. By the Subcommittee on Power Plants. (Third Annual, 1917)----- Part 1. Performance of Aeronautic Engines at High Altitudes. Part 2. Radiator Design. Part 3. Spark Plugs.	
³ 24	Air Flow through Poppet Valves. By G. W. Lewis and E. M. Nutting. (Fourth Annual, 1918)-----	

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343	Synopsis of Aeronautic Radiator Investigations for the years 1917 and 1918. By R. V. Kleinschmidt. (Fourth Annual, 1918)	
345	Effect of Compression Ratio, Pressure, Temperature, and Humidity on Power. (Fourth Annual, 1918) Part 1. Variation of Horsepower with Altitude and Compression Ratio. By H. C. Dickinson, W. S. James, and G. V. Anderson. Part 2. Value of Supercharging. By H. C. Dickinson and G. V. Anderson. Part 3. Variation of Horsepower with Temperature. By H. C. Dickinson, W. S. James, and G. V. Anderson. Part 4. Influence of Water Injection on Engine Performance. By V. W. Brinkerhoff.	
146	A Study of Airplane Engine Tests. By V. R. Gage. (Fourth Annual, 1918)	
348	Carbureting Conditions Characteristic of Aircraft Engines. By P. S. Tice. (Fourth Annual, 1918)	
349	Metering Characteristics of Carburetors. By P. S. Tice. (Fourth Annual, 1918)	
351	Spark-Plug Defects and Tests. (Fifth Annual, 1919) Part 1. Causes of Failure of Spark Plugs. By F. B. Silsbee. Part 2. Gas Leakage in Spark Plugs. By L. Sawyer. Part 3. Methods for Tests of Spark Plugs. By H. C. Dickinson.	
52	Temperatures in Spark Plugs having Steel and Brass Shells. By C. S. Cragoe. (Fifth Annual, 1919)	\$0.05

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3 53	Properties and Preparation of Ceramic Insulators for Spark Plugs. (Fifth Annual, 1919)----- Part 1. Methods of Measuring Resistance of Insulators at High Temperatures. By F. B. Silsbee and R. K. Honaman. Part 2. Electrical Resistance of Various Insulating Materials at High Temperatures. By R. K. Honaman and E. L. Fonseca. Part 3. Preparation and Composition of Ceramic Bodies for Spark-Plug Insulators. By A. V. Bleininger. Part 4. Cements for Spark-Plug Electrodes. By H. F. Staley.	
3 54	Effect of Temperature and Pressure on the Sparking Voltage. By F. B. Silsbee and L. B. Loeb. (Fifth Annual, 1919)-----	
55	Investigation of the Muffling Problem for Airplane Engines. By G. B. Upton and V. R. Gage. (Fifth Annual, 1919)-----	
3 56	Heat Energy of Various Ignition Sparks. (Fifth Annual, 1919)----- Part 1. Method of Measuring Heat Energy of Ignition Sparks. By F. B. Silsbee, L. B. Loeb, and E. L. Fonseca. Part 2. Measurement of Heat Energy per Spark of Various Ignition Systems. By F. B. Silsbee and E. L. Fonseca.	\$0.10
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3 58	Characteristics of High-Tension Magnetos. (Fifth Annual, 1919)----- Part 1. Cycle of Operation of Jump-Spark Ignition Systems. By F. B. Silsbee. Part 2. Transformation Ratio and Coupling in High-Tension Magnetos. By F. B. Silsbee.	
59	General Analysis of Airplane Radiator Problems. By H. C. Dickinson, W. S. James, and R. V. Kleinschmidt. (Fifth Annual, 1919)-----	.05

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62	Effect of Altitude on Radiator Performance. By W. S. James and S. R. Parsons. (Fifth Annual, 1919)-----	. 10
63	Results of Tests on Radiators for Aircraft Engines. (Fifth Annual, 1919)----- Part 1. Heat Dissipation of Radiators. By H. C. Dickinson, W. S. James, and R. V. Kleinschmidt. Part 2. Water Flow through Radiator Cores. By W. S. James.	. 10
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* 87	Effects of Nature of Cooling Surface on Radiator Performance. By S. R. Parsons and R. V. Kleinschmidt. (Sixth Annual, 1920)-----	
88	Pressure Drop in Radiator Air Tubes. By S. R. Parsons. (Sixth Annual, 1920)-----	. 05
* 101	The Calculated Performance of Airplanes Equipped with Supercharging Engines. By E. C. Kemble. (Sixth Annual, 1920)-----	
* 102	Performance of a Liberty 12 Airplane Engine. By S. W. Sparrow and H. S. White. (Sixth Annual, 1920)-----	
* 103	Performance of a 300-horsepower Hispano-Suiza Airplane Engine. By S. W. Sparrow and H. S. White. (Sixth Annual, 1920)-----	
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1 123	Simplified Theory of the Magneto. By F. B. Silsbee. (Seventh Annual, 1921)	
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3 135	Performance of B. M. W. 185-horsepower Air- plane Engine. By S. W. Sparrow. (Eighth Annual, 1922)	
3 158	Mathematical Equations for Head Conduction in the Fins of Air-Cooled Engines. By D. R. Harper and W. G. Brown. (Eighth Annual, 1922)	
3 159	Jet Propulsion for Airplanes. By Edgar Buck- ingham. (Ninth Annual, 1923)	
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3 187	Flame Speed and Spark Intensity. By D. W. Randolph and F. B. Silsbee. (Tenth Annual, 1924)	
3 189	Relation of Fuel-Air Ratio to Engine Perform- ance. By Stanwood W. Sparrow. (Tenth Annual, 1924)	
3 190	Correcting Horsepower Measurements to a Standard Temperature. By Stanwood W. Sparrow. (Tenth Annual, 1924)	
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258	Some Factors Affecting the Reproducibility of Penetration and the Cut-Off of Oil Sprays for Fuel Injection Engines. By E. G. Beardsley. (Thirteenth Annual, 1927)-----	. 05
³ 261	Resistance and Cooling Power of Various Radiators. By R. H. Smith. (Thirteenth Annual, 1927)-----	
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263	Preliminary Flight Tests of the N. A. C. A. Roots Type Aircraft Engine Supercharger. By Arthur W. Gardiner and Elliott G. Reid. (Thirteenth Annual, 1927)-----	. 10

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274	The N. A. C. A. Photographic Apparatus for Studying Fuel Sprays from Oil Engine Injection Valves and Test Results from Several Researches. By Edward G. Beardsley. (Thirteenth Annual, 1927)-----	. 10
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314	Drag and Cooling with Various Forms of Cowling for a "Whirlwind" Radial Air-Cooled Engine—II. By Fred E. Weick. (Fifteenth Annual, 1929)-----	. 20
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403	Ice Prevention on Aircraft by Means of Engine Exhaust Heat and a Technical Study of Heat Transmission from a Clark Y Airfoil. By Theodore Theodorsen & William C. Clay. (Eighteenth Annual, 1932)-----	. 20

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414	The Effect on Airplane Performance of Several Types of Low-Drag Cowling for Radial Air-Cooled Engines. By Wm. H. McAvoy, Oscar W. Schey, and Alfred W. Young. (Eighteenth Annual, 1932)-----	. 20
425	The Effect of Nozzle Design and Operation Conditions on the Atomization and Distribution of Fuel Sprays. By Dana W. Lee. (Eighteenth Annual, 1932)-----	. 10
426	The Effect of Humidity on Engine Power at Altitude. By D. B. Brooks and E. A. Garlock. (Eighteenth Annual, 1932)-----	. 05
429	The N. A. C. A. Apparatus for Studying the Formation and Combustion of Fuel Sprays and the Results from Preliminary Tests. By A. M. Rothrock. (Eighteenth Annual, 1932)-----	. 10
433	Rates of Fuel Discharge as Affected by the Design of Fuel-Injection Systems for Internal-Combustion Engines. By A. G. Gelalles and E. T. Marsh. (Eighteenth Annual, 1932)-----	. 05
435	Fuel Vaporization and its Effect on Combustion in a High-Speed Compression-Ignition Engine. By A. M. Rothrock and C. D. Waldron. (Eighteenth Annual, 1932)-----	. 10
438	Experiments on the Distribution of Fuel in Fuel Sprays. By Dana W. Lee. (Eighteenth Annual, 1932)-----	. 05
440	The Mechanism of Atomization Accompanying Solid Injection. By R. A. Castleman, Jr. (Eighteenth Annual, 1932)-----	. 05
454	Photomicrographic Studies of Fuel Sprays. By Dana W. Lee and Robert C. Spencer. (Nineteenth Annual, 1933)-----	. 10

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469	Increasing the Air Charge and Scavenging the Clearance Volume of a Compression-Ignition Engine. By J. A. Spanogle, C. W. Hicks, and H. H. Foster. (Nineteenth Annual, 1933)-----	. 05
471	Performance of a Fuel-Injection Spark-Ignition Engine Using a Hydrogenated Safety Fuel. By Oscar W. Schey and Alfred W. Young. (Nineteenth Annual, 1933)-----	. 05
477	Effect of Viscosity on Fuel Leakage between Lapped Plungers and Sleeves and on the Discharge from a Pump-Injection System. By A. M. Rothrock and E. T. Marsh. (Twentieth Annual, 1934)-----	. 05

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3 42	A New Process for the Production of Aircraft-Engine Fuels. By Auguste Jean Paris, jr., and W. Francklyn Paris. (Fourth Annual, 1918)-----	
3 47	Power Characteristics of Fuels for Aircraft Engines. (Fourth Annual, 1918)----- Part 1. Power Characteristics of Aviation Gasoline. By E. W. Roberts. Part 2. Power Characteristics of Sumatra and Borneo Gasolines. By E. W. Roberts. Part 3. Power Characteristics of 20 per cent Benzol Mixtures. By E. W. Roberts.	
89	Comparison of Alcogas Aviation Fuel with Export Aviation Gasoline. By V. R. Gage, S. W. Sparrow, and D. R. Harper. (Sixth Annual, 1920)-----	\$0. 05
90	Comparison of Hector Fuel with Export Aviation Gasoline. By H. C. Dickinson, V. R. Gage, and S. W. Sparrow. (Sixth Annual, 1920)-----	. 05
232	Fuels for High-Compression Engines. By Stanwood W. Sparrow. (Eleventh Annual, 1925)-----	. 10

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FUELS—Continued

No.	Title	Price
305	The Gaseous Explosive Reaction—A Study of the Kinetics of Composite Fuels. By F. W. Stevens. (Fourteenth Annual, 1928)-----	\$0. 15
321	Fuel Vapor Pressures and Their Relation to the Preparation of Fuel for Combustion in Fuel Injection Engines. By W. F. Joachim and A. M. Rothrock. (Fifteenth Annual, 1929)-----	
337	The Gaseous Explosive Reaction at Constant Pressure—The Reaction Order and Reaction Rate. By F. W. Stevens. (Sixteenth Annual, 1930)-----	. 10
372	The Gaseous Explosive Reaction: The Effect of Pressure on the Rate of Propagation of the Reaction Zone and upon the Rate of Molecular Transformation, By F. W. Stevens. (Seventeenth Annual, 1931)-----	. 10
476	Relation of Hydrogen and Methane to Carbon Monoxide in Exhaust Gases from Internal-Combustion Engines. By Harold C. Gerrish and Arthur M. Tessmann. (Twentieth Annual, 1934)-----	. 15 . 05

GASES

40	The Ferrosilicon Process for the Generation of Hydrogen. By E. R. Weaver, W. M. Berry, V. L. Johnson, and B. D. Gordon. (Fourth Annual, 1918)-----	\$0. 15
41	Testing of Balloon Gas. By Junius David Edwards. (Fourth Annual, 1918)-----	. 05

HELICOPTERS

80	Stability of the Parachute and Helicopter. By H. Bateman. (Fifth Annual, 1919)-----
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HYDRODYNAMICS

No.	Title	Price
116	Applications of Modern Hydrodynamics to Aeronautics. By L. Prandtl. (Seventh Annual, 1921)-----	\$0. 10
405	Application of Practical Hydrodynamics to Airship Design. By R. H. Upson and W. A. Klikoff. (Eighteenth Annual, 1932)-----	. 15
470	The N. A. C. A. Tank—A High-Speed Towing Basin for Testing Models of Seaplane Floats. By Starr Truscott. (Nineteenth Annual, 1933)-----	. 10

INSTRUMENTS

1 2	Investigation of Pitot Tubes. (First Annual, 1915)----- Part 1. The Pitot Tube and Other Anemometers for Airplanes. By W. H. Herschel.	
	Part 2. The Theory of the Pitot and Venturi Tubes. By E. Buckingham.	
1 8	General Specifications Covering Requirements of Aeronautic Instruments. By National Advisory Committee for Aeronautics. (Second Annual, 1916)-----	
31	Development of Air Speed Nozzles. By A. F. Zahm. (Fourth Annual, 1918)-----	\$0. 10
32	The Airplane Tensiometer. By L. J. Larson. (Fourth Annual, 1918)-----	. 05
50	Calculation of Low Pressure Indicator Diagrams. By E. C. Kemble. (Fourth Annual, 1918)-----	. 05
81	Comparison of U. S. and British Standard Pitot-Static Tubes. By A. F. Zahm and R. H. Smith. (Fifth Annual, 1919)-----	. 05
94	The Efficiency of Small Bearings in Instruments of the Type Used in Aircraft. By F. H. Norton. (Sixth Annual, 1920)-----	. 05

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INSTRUMENTS—Continued

No.	Title	Price
99	Acceleration in Flight. By F. H. Norton and E. T. Allen. (Sixth Annual, 1920)-----	\$0. 10
100	Accelerometer Design. By F. H. Norton and Edward P. Warner. (Sixth Annual, 1920)-----	
107	A High-Speed Engine Pressure Indicator of the Balanced Diaphragm Type. By H. C. Dickinson and F. B. Newell. (Sixth Annual, 1920)-----	
110	The Altitude Effect on Air Speed Indicators. By M. D. Hersey, F. L. Hunt, and H. N. Eaton. (Sixth Annual, 1920)-----	
125	Aeronautic Instruments: Section I—General Classification of Instruments and Problems, Including Bibliography. By Bureau of Standards. (Seventh Annual, 1921)-----	. 05
126	Aeronautic Instruments: Section II—Altitude Instruments. By Bureau of Standards. (Seventh Annual, 1921)----- Part 1. Altimeters and Barographs. Part 2. Precision Altimeter Design. Part 3. Stascopes and Rate-of-Climb Indicators. Part. 4. Aerographs and Strut Thermometers.	. 25
127	Aeronautic Instruments: Section III—Aircraft Speed Instruments. By Bureau of Standards. (Seventh Annual, 1921)----- Part 1. Air Speed Indicators. Part 2. Testing of Air Speed Meters. Part 3. Principles of Ground-Speed Instruments.	. 10
128	Aeronautic Instruments: Section IV—Direction Instruments. By Bureau of Standards. (Seventh Annual, 1921)----- Part 1. Inclinometers and Banking Indicators. Part 2. The Testing and Use of Magnetic Compasses for Airplanes. Part 3. Aircraft Compasses—Description and Classification. Part 4. Turn Indicators.	. 25

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INSTRUMENTS—Continued

No.	Title	Price
3 129	Aeronautic Instruments: Section V—Power-Plant Instruments. By Bureau of Standards. (Seventh Annual, 1921)----- Part 1. Airplane Tachometers. Part 2. Testing of Airplane Tachometers. Part 3. Thermometers for Aircraft Engines. Part 4. Air-Pressure and Oil-Pressure Gages. Part 5. Gasoline-Depth Gages and Flow Meters for Aircraft.	
130	Aeronautic Instruments: Section VI—Oxygen Instruments. By Bureau of Standards. (Seventh Annual, 1921)-----	\$0.10
131	Aeronautic Instruments: Section VII—Aerial Navigation Instruments. By Bureau of Standards. (Seventh Annual, 1921)-----	.10
132	Aeronautic Instruments: Section VIII—Recent Developments and Outstanding Problems. By Bureau of Standards. (Seventh Annual, 1921)-----	.05
3 156	The Altitude Effect of Air Speed Indicators—II. By H. N. Eaton and W. A. McNair. (Eighth Annual, 1922)-----	
3 160	An Airship Slide Rule. By E. R. Weaver and S. F. Pickering. (Ninth Annual, 1923)-----	
3 165	Diaphragms for Aeronautic Instruments. By M. D. Hersey. (Ninth Annual, 1923)-----	
3 166	The Aerodynamic Plane Table. By A. F. Zahm. (Ninth Annual, 1923)-----	
176	A Constant-Pressure Bomb. By F. W. Stevens. (Ninth Annual, 1923)-----	.05
198	Astronomical Methods in Aerial Navigation. By K. Hilding Beij. (Tenth Annual, 1924)-----	.15
199	Interference Tests on an N. A. C. A. Pitot Tube. By Elliott G. Reid. (Tenth Annual, 1924)-----	.05
3 206	Nonmetallic Diaphragms for Instruments. By H. N. Eaton and C. T. Buckingham. (Tenth Annual, 1924)-----	

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INSTRUMENTS—Continued

No.	Title	Price
264	Differential Pressures on a Pitot-Venturi and a Pitot-Static Nozzle over 360° Pitch and Yaw. By R. M. Bear. (Thirteenth Annual, 1927)-----	\$0. 05
270	The Measurement of Pressure Through Tubes in Pressure Distribution Tests. By Paul E. Hemke. (Thirteenth Annual, 1927)-----	. 10
299	Investigation of Damping Liquids for Aircraft Instruments. By G. H. Keulegan. (Fourteenth Annual, 1928)-----	. 10
310	Pressure Element of Constant Logarithmic Stiffness for Temperature Compensated Altimeter. By W. G. Brombacher and F. Cordero. (Fifteenth Annual, 1929)-----	. 10
320	The Measurement of Fluctuations of Air Speed by the Hot Wire Anemometer. By H. L. Dryden and A. M. Keuthe. (Fifteenth Annual, 1929)-----	. 15
358	Temperature Coefficient of the Modulus of Rigidity of Aircraft Instrument Diaphragm and Spring Materials. By W. G. Brombacher and E. R. Melton. (Sixteenth Annual, 1930)-----	. 10
371	Present Status of Aircraft Instruments. By the Subcommittee on Air Navigation Instruments. (Seventeenth Annual, 1931)-----	. 15
388	Pressure Cell Investigation. By Theodore Theodorsen. (Seventeenth Annual, 1931)-----	. 10
398	Investigation of Damping Liquids for Aircraft Instruments—II. By M. R. Houseman and H. W. Kirschbaum. (Seventeenth Annual, 1931)-----	. 15
420	Aircraft Speed Instruments. By K. Hilding Beij. (Eighteenth Annual, 1932)-----	. 10
448	Improved Apparatus for the Measurement of Fluctuations of Air Speed in Turbulent Flow. By W. C. Mock, jr., and H. L. Dryden. (Nineteenth Annual, 1933)-----	. 10
466	Aircraft Power-Plant Instruments. By Harcourt Sontag and W. G. Brombacher. (Nineteenth Annual, 1933)-----	. 15

MATERIALS

No.	Title	Price
¹ 5	Relative Worth of Improvements on Fabries. By the Goodyear Tire & Rubber Co. (First Annual, 1915)-----	
¹ 6	Investigations of Balloon and Airplane Fabrics. (First Annual, 1915)-----	
	Part 1. Balloon and Airplane Fabrics. By Willis A. Gibbons and Omar H. Smith.	
	Part 2. Skin Friction of Various Surfaces in Air. By Willis A. Gibbons.	
¹ 16	The Stretching of the Fabric and the Deforma- tion of the Envelope in Nonrigid Balloons. (Third Annual, 1917)-----	
	Part 1. The Stretching of the Fabric and the Shape of the Envelope. By Rudolf Haas.	
	Part 2. The Deformation of the Envelope of the Siemens-Schuckert Airships. By Alexander Dietzius.	
¹ 22	Fabrics for Aeronautic Construction. By Sub- committee on Standardization and Investi- gation of Materials. (Third Annual, 1917)-----	
	Part 1. Cotton Airplane Fabrics.	
	Part 2. Balloon Fabrics.	
³ 33	Self-Luminous Materials. By N. E. Dorsey. (Fourth Annual, 1918)-----	
¹ 34	Aluminum and Its Light Alloys. By Paul D. Merica. (Fourth Annual, 1918)-----	
¹ 36	The Structure of Airplane Fabrics. By E. Dean Walen. (Fourth Annual, 1918)-----	
³ 37	Fabric Fastenings. By E. Dean Walen and R. T. Fisher. (Fourth Annual, 1918)-----	
¹ 38	Airplane Dopes and Doping. By W. H. Smith. (Fourth Annual, 1918)-----	

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MATERIALS—Continued

No.	Title	Price
39	The Testing of Balloon Fabrics. By Junius David Edwards and Irwin L. Moore. (Fourth Annual, 1918)-----	\$0.05
	Part 1. Characteristic Exposure Tests of Balloon Fabrics.	
	Part 2. Use of Ultra-Violet Light for Testing Balloon Fabrics.	
3 65	The Kiln Drying of Woods for Airplanes. By Harry D. Tieman. (Fifth Annual, 1919)-----	
3 66	Glues Used in Airplane Parts. By S. W. Allen and T. R. Truax. (Fifth Annual, 1919)-----	
3 67	Supplies and Production of Aircraft Woods. By W. N. Sparhawk. (Fifth Annual, 1919)-----	
68	The Effect of Kiln Drying on the Strength of Airplane Woods. By T. R. C. Wilson. (Fifth Annual, 1919)-----	.15
3 84	Data on the Design of Plywood for Aircraft. By Armin Elmendorf. (Sixth Annual, 1920)-----	
3 85	Moisture Resistant Finishes for Airplane Woods. By M. E. Dunlap. (Sixth Annual, 1920)-----	
248	The Corrosion of Magnesium and of the Magnesium Aluminum Alloys Containing Manganese. By J. A. Boyer. (Twelfth Annual, 1926)-----	.20
354	Aircraft Woods: Their Properties, Selection, and Characteristics. By L. J. Markwardt. (Sixteenth Annual, 1930)-----	.20

METEOROLOGY

1 4 Preliminary Report on the Problem of the Atmosphere in Relation to Aeronautics. By Charles F. Marvin. (First Annual, 1915)-----

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METEOROLOGY—Continued

No.	Title	Price
13	Meteorology and Aeronautics. By Wm. R. Blair. (Third Annual, 1917)----- Part 1. Physical Properties and Dynamics of the Atmosphere. Part 2. Topographic and Climatic Factors in Relation to Aeronautics. Part 3. Current Meteorology and Its Use.	\$0.10
* 147	Standard Atmosphere. By Willis Ray Gregg. (Eighth Annual, 1922)-----	
* 216	The Reduction of Airplane Flight-Test Data to Standard Atmosphere Conditions. By Walter S. Diehl and E. P. Lesley. (Eleventh Annual, 1925)-----	
218	Standard Atmosphere—Tables and Data. By Walter S. Diehl. (Eleventh Annual, 1925)-----	.10
245	Meteorological Conditions along Airways. By W. R. Gregg. (Twelfth Annual, 1926)-----	.10
* 246	Tables for Calibrating Altimeters and Computing Altitudes Based on the Standard Atmosphere. By W. G. Brombacher. (Twelfth Annual, 1926)-----	
376	Some Approximate Equations for the Standard Atmosphere. By Walter S. Diehl. (Seventeenth Annual, 1931)-----	.15

MISCELLANEOUS

308	Aircraft Accidents—Methods of Analysis. By the Special Committee on the Nomenclature, Subdivision, and Classification of Aircraft Accidents, N. A. C. A. (Fourteenth Annual, 1928)-----	\$0.10
357	Aircraft Accidents—Method of Analysis. By the Committee on Aircraft Accidents. (Sixteenth Annual, 1930)-----	.10

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NOMENCLATURE

No.	Title	Price
¹ 9	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Second Annual, 1916)-----	
¹ 15	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Third Annual, 1917)-----	
³ 25	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Fourth Annual, 1918)-----	
91	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Sixth Annual, 1920)-----	
³ 157	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Eighth Annual, 1922)-----	\$0. 15
³ 240	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Twelfth Annual, 1926)-----	
474	Nomenclature for Aeronautics. By National Advisory Committee for Aeronautics. (Nineteenth Annual, 1933)-----	
	NOTE—Reports 9, 15, 25, 91, 157, and 240 are obsolete.	. 10

PARACHUTES

³ 80	Stability of the Parachute and Helicopter. By H. Bateman. (Fifth Annual, 1919)-----
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PROPELLERS

No.	Title	Price
³ 14	Experimental Research on Air Propellers. By Wm. F. Durand. (Third Annual, 1917)----- Part 1. The Aerodynamic Laboratory at Leland Stanford Junior University and the Equipment Installed with Special Reference to Tests on Air Propellers. Part 2. Tests on 48 Model Forms of Air Propellers, with Analysis and Discussion of Results and Presentation of the Same in Graphic Form. Part 3. A Brief Discussion of the Law of Similitude as Affecting the Relation Between the Results Derived from Model Forms and Those to be Anticipated from Full-sized Forms.	
¹ 19	Periodic Stresses in Gyroscopic Bodies—with Applications to Air Screws. By A. F. Zahm. (Third Annual, 1917)----- Part 1. The Gyroscopic Particle. Part 2. The Gyroscopic Three-Dimensional Body.	
³ 29	The General Theory of Blade Screws. By George de Bothezat. (Fourth Annual, 1918)-----	
¹ 30	Experimental Research on Air Propellers—II. By Wm. F. Durand and E. P. Lesley. (Fourth Annual, 1918)-----	
64	Experimental Research on Air Propellers—III. By Wm. F. Durand and E. P. Lesley. (Fifth Annual, 1919)-----	\$0.10
71	Slip-Stream Corrections in Performance Computation. By Edward P. Warner. (Fifth Annual, 1919)-----	.05
³ 109	Experimental Research on Air Propellers—IV. By Wm. F. Durand and E. P. Lesley. (Sixth Annual, 1920)-----	
113	Tests on Air Propellers in Yaw. By Wm. F. Durand and E. P. Lesley. (Seventh Annual, 1921)-----	.10

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PROPELLERS—Continued

No.	Title	Price
141	Experimental Research on Air Propellers—V. By Wm. F. Durand and E. P. Lesley. (Eighth Annual, 1922)-----	\$0. 15
³ 168	The General Efficiency Curve for Air Propellers. By Walter S. Diehl. (Ninth Annual, 1923)-----	
³ 175	Analysis of W. F. Durand's and E. P. Lesley's Propeller Tests. By Max M. Munk. (Ninth Annual, 1923)-----	
³ 177	The Effect of Slip-Stream Obstructions on Air Propellers. By E. P. Lesley and B. M. Woods. (Ninth Annual, 1923)-----	
³ 178	Relative Efficiency of Direct and Geared Drive Propellers. By Walter S. Diehl. (Ninth An- nual, 1923)-----	
³ 183	The Analysis of Free-Flight Propeller Tests and Its Application to Design. By Max M. Munk. (Ninth Annual, 1923)-----	
³ 186	Application of Propeller-Test Data to Design and Performance Calculations. By Walter S. Diehl. (Tenth Annual, 1924)-----	
³ 196	Comparison of Model Propeller Tests with the Airfoil Theory. By W. F. Durand and E. P. Lesley. (Tenth Annual, 1924)-----	
220	Comparison of Tests on Airplane Propeller in Flight with Wind-Tunnel Model Tests on Simi- lar Forms. By W. F. Durand and E. P. Les- ley. (Eleventh Annual, 1925)-----	. 15
³ 235	Interaction between Air Propellers and Airplane Structures. By W. F. Durand. (Twelfth An- nual, 1926)-----	
237	Tests on Thirteen Navy Type Model Propellers. By W. F. Durand. (Twelfth Annual, 1926)-----	. 10
259	Characteristics of Propeller Sections Tested in the Variable Density Wind Tunnel. By East- man N. Jacobs. (Thirteenth Annual, 1927)-----	. 10
292	Characteristics of Five Propellers in Flight. By J. W. Crowley, jr., and R. E. Mixson. (Fourteenth Annual, 1928)-----	. 15

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PROPELLERS—Continued

No.	Title	Price
301	Full Scale Tests of Wood Propellers on a VE-7 Airplane in the Propeller Research Tunnel. By Fred E. Weick. (Fourteenth Annual, 1928)-----	\$0. 15
302	Full Scale Tests on a Thin Metal Propeller at Various Tip Speeds. By Fred E. Weick. (Fourteenth Annual, 1928)-----	. 10
306	Full Scale Wind Tunnel Tests of a Series of Metal Propellers on a VE-7 Airplane. By Fred E. Weick. (Fourteenth Annual, 1928)-----	. 10
326	Tests of Five Metal Model Propellers with Various Pitch Distributions in a Free Wind Stream and in Combination with a Model VE-7 Fuselage. By E. P. Lesley and Elliott G. Reid. (Fifteenth Annual, 1929)-----	. 15
338	The Effect of Reduction Gearing on Propeller-Body Interference as Shown by Full Scale Wind Tunnel Tests. By Fred E. Weick. (Sixteenth Annual, 1930)-----	. 15
339	Full Scale Wind Tunnel Tests with a Series of Propellers of Different Diameters on a Single Fuselage. By Fred E. Weick. (Sixteenth Annual, 1930)-----	. 15
340	Full Scale Wind Tunnel Tests on Several Metal Propellers having Different Blade Forms. By Fred E. Weick. (Sixteenth Annual, 1930)-----	. 10
350	Working Charts for the Selection of Aluminum Alloy Propellers of a Standard Form to Operate with Various Aircraft Engines and Bodies. By Fred E. Weick. (Sixteenth Annual, 1930)-----	. 10
351	Full-Scale Wind Tunnel Tests of a Propeller with the Diameter Changed by Cutting Off the Blade Tips. By Donald H. Wood. (Sixteenth Annual, 1930)-----	. 15
375	Tests of Metal Propeller at High Tip Speeds. By Donald H. Wood. (Seventeenth Annual, 1931)-----	. 10
378	A Comparison of Propellers having R. A. F.-6 and Clark Y Airfoil Sections. By Hugh B. Freeman. (Seventeenth Annual, 1931)-----	. 10

PROPELLERS—Continued

No.	Title	Price
389	The Effect of Small Angles of Yaw and Pitch on the Characteristics of Airplane Propellers. By Hugh B. Freeman. (Seventeenth Annual, 1931)-----	\$0.10
415	Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. Part I. Thick Wing—N. A. C. A. Cowled Nacelle—Tractor Propeller. By Donald H. Wood. (Eighteenth Annual, 1932)-----	.10
421	Measurement of the Differential and Total Thrust and Torque of Six Full-Scale Adjustable-Pitch Propellers. By George W. Stickle. (Eighteenth Annual, 1932)-----	.10
436	Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. Part II—Thick Wing—Various Radial-Engine Cowlings—Tractor Propeller. By Donald H. Wood. (Eighteenth Annual, 1932)-----	.10
447	Static Thrust of Airplane Propellers. By Walter S. Diehl. (Nineteenth Annual, 1933)-----	.10
462	Tests of Nacelle-Propeller Combinations in Various Positions with Reference to Wings. Part III—Clark Y Wing—Various Radial-Engine Cowlings—Tractor Propeller. By Donald H. Wood. (Nineteenth Annual, 1933)-----	.10
464	Negative Thrust and Torque Characteristics of an Adjustable-Pitch Metal Propeller. By Edwin P. Hartman. (Nineteenth Annual, 1933)-----	.05
481	Working Charts for the Determination of Propeller Thrust at Various Air Speeds. By Edwin P. Hartman-----	.05

SEAPLANES

1 209	Characteristics of a Single-Float Seaplane during Take-off. By J. W. Crowley, jr., and K. M. Ronan. (Tenth Annual, 1924)-----	
1 226	Characteristics of a Boat-Type Seaplane during Take-Off. By J. W. Crowley, jr., and K. M. Ronan. (Eleventh Annual, 1925)-----	
242	Characteristics of a Twin-Float Seaplane during Take-Off. By John W. Crowley, jr., and K. M. Ronan. (Twelfth Annual, 1926)-----	\$0. 10
290	Water Pressure Distribution on a Seaplane Float. By F. L. Thompson. (Fourteenth Annual, 1928)-----	. 10
328	Water Pressure Distribution on a Twin-Float Seaplane. By F. L. Thompson. (Fifteenth Annual, 1929)-----	. 10
346	Water Pressure Distribution on a Flying Boat Hull. By F. L. Thompson. (Sixteenth Annual, 1930)-----	. 10
453	The Estimation of Maximum Load Capacity of Seaplanes and Flying Boats. By Walter S. Diehl. (Nineteenth Annual, 1933)-----	. 05

STABILITY AND CONTROL

1 1	Report on Behavior of Airplanes in Gusts. (First Annual, 1915)-----	
	Part 1. Experimental Analysis of Inherent Longitudinal Stability for a Typical Bi-plane. By J. C. Hunsaker.	
	Part 2. Theory of an Airplane Encountering Gusts. By E. B. Wilson.	
1 17	An Investigation of the Elements which Contribute to Statical and Dynamical Stability, and of the Effects of Variation in those Elements. By Alexander Klemin, Edward P. Warner, and George M. Denninger. (Third Annual, 1917)-----	
1 21	Theory of an Airplane Encountering Gusts—II. By E. B. Wilson. (Third Annual, 1917)-----	

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STABILITY AND CONTROL—Continued

No.	Title	Price
3 26	The Variation of Yawing Moment Due to Rolling. By E. B. Wilson. (Fourth Annual, 1918)-----	
3 27	Theory of an Airplane Encountering Gusts—III. By E. B. Wilson. (Fourth Annual, 1918)-----	
3 95	Diagrams of Airplane Stability. By H. Batesmen. (Sixth Annual, 1920)-----	
1 96	Statical Longitudinal Stability of Airplanes. By Edward P. Warner. (Sixth Annual, 1920)-----	
112	Control in Circling Flight. By F. H. Norton and E. T. Allen. (Seventh Annual, 1921)-----	
3 120	Practical Stability and Controllability of Airplanes. By F. H. Norton. (Seventh Annual, 1921)-----	\$0.10
3 153	Controllability and Maneuverability of Airplanes. By F. H. Norton and W. G. Brown. (Eighth Annual, 1922)-----	
172	Dynamic Stability as Affected by the Longitudinal Moment of Inertia. By Edwin B. Wilson. (Ninth Annual, 1923)-----	.05
3 293	Two Practical Methods for the Calculation of the Horizontal Tail Area Necessary for a Statically Stable Airplane. By Walter S. Diehl. (Fourteenth Annual, 1928)-----	
298	Effect of Variation of Chord and Span of Ailerons on Rolling and Yawing Moments in Level Flight. By R. H. Heald and D. L. Strother. (Fourteenth Annual, 1928)-----	.10
343	Effect of Variation of Chord and Span of Ailerons on Rolling and Yawing Moments at Several Angles of Pitch. By R. H. Heald, D. H. Strother, and B. H. Monish. (Sixteenth Annual, 1930)-----	.15
379	Rolling Moments due to Rolling and Yaw for Four Wing Models in Rotation. By Montgomery Knight and Carl J. Wenzinger. (Seventeenth Annual, 1931)-----	.15

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STABILITY AND CONTROL—Continued

No.	Title	Price
386	Maneuverability Investigation of an F6C-4 Fighter Airplane. By C. H. Dearborn and H. W. Kirschbaum. (Seventeenth Annual, 1931)-----	\$0. 20
393	Span-Load Distribution as a Factor in Stability in Roll. By Montgomery Knight and Richard W. Noyes. (Seventeenth Annual, 1931)-----	. 10
442	A Comparison between the Theoretical and Measured Longitudinal Stability Characteristics of an Airplane. By Hartley A. Soulé and John B. Wheatley. (Nineteenth Annual, 1933)-----	. 05
457	Maneuverability Investigation of an "O3U-1" Observation Airplane. By F. L. Thompson and H. W. Kirschbaum. (Nineteenth Annual, 1933)-----	. 05
467	The Experimental Determination of the Moments of Inertia of Airplanes. By Hartley A. Soulé and Marvel P. Miller. (Nineteenth Annual, 1933)-----	. 05

STRENGTH OF CONSTRUCTION

1 3	Report on the Investigations of Aviation Wires and Cables, Their Fastenings and Terminal Connections. By John A. Roebling's Sons Co. (First Annual, 1915)-----
3 35	The Strength of One-Piece, Solid, Built-Up, and Laminated Wood Airplane Wing Beams. By John H. Nelson. (Fourth Annual, 1918)-----
3 76	Analysis of Fuselage Stresses. By Edward P. Warner and Roy G. Miller. (Fifth Annual, 1919)-----
3 82	Airplane Stress Analysis. By A. F. Zahm. (Fifth Annual, 1919)-----
3 92	Analysis of Wing Truss Stresses. By Edward P. Warner and Roy G. Miller. (Sixth Annual, 1920)-----

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STRENGTH OF CONSTRUCTION—Continued

No.	Title	Price
3 104	Torsion of Wing Trusses at Diving Speeds. By Roy G. Miller. (Sixth Annual, 1920)	
137	Point Drag and Total Drag of Navy Struts No. 1 Modified. By A. F. Zahm, R. H. Smith, and G. C. Hill. (Eighth Annual, 1922)	
3 140	Lift and Drag Effects on Wing Tip-Rake. By A. F. Zahm, R. M. Bear, and G. C. Hill. (Eighth Annual, 1922)	\$0.05
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